Material Safety Data Sheet

AC-816 MASKANT

QUICK IDENTIFIER
Common Name: (used on label and list)

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910. 1200. Standard must be consulted for specific requirements.

DPM 6225

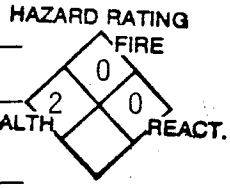
FEB 2 1988

OCCUPATIONAL SAFETY & HEALTH

SECTION 1 -

Manufacturer's Name	AC Products, Inc.		
Address	172 East La Jolla Street	Emergency Telephone No.	(714) 630-7311
City, State, and ZIP	Placentia, California 92670	Other Information Calls	(714) 630-7311
Signature of Person Responsible for Preparation (Optional)		Date Prepared	12-24-87

HAZARD RATING



SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY

Hazardous Component(s) (chemical & common name(s))	OSHA PEL	ACGIH TLV	Other Exposure Limits	% (optional)	CAS NO.
Perchloroethylene	100	50	-	76.5%	000127-18-4
Styrene-butadiene-styrene rubber, talc, hydrocarbon resins (Non-hazardous)	Not available		-	23.5%	Not available

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	250°F.	Specific Gravity (H_2O=1)	1.56	Vapor Pressure (mm Hg)	Not available
		Vapor Density (Air = 1)	Heavier than air		
Solubility in Water	0.015%	Reactivity in Water	None		
Appearance and Odor	Blue-green viscous liquid with perchloroethylene odor	Melting Point	N/A		

SECTION 4 – FIRE & EXPLOSION DATA

Flash Point	None F. C.	Method Used	Pensky Martens	Flammable Limits in Air % by Volume LEL Lower	N/A
				UEL Upper	N/A
Auto-Ignition Temperature	N/A	Extinguisher Media	N/A		

Special Fire Fighting Procedures: Use self-contained, positive pressure respiratory equipment.

Unusual Fire and Explosion Hazards: Decomposition to toxic gases when exposed to flame.

(see reverse)

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SECTION 5 – PHYSICAL HAZARDS (REACTIVITY DATA)

Stability: Unstable ☐ Stable ☒ Conditions to Avoid: Avoid open flame, welding arcs, high temperature sources which induce thermal decomposition.

Incompatability (Materials to Avoid): Strong acids or bases, oxidizing materials and selected amines.

Hazardous Decomposition Products: Hydrogen chloride, chlorine, phosgene, CO_2, CO, when exposed to flame or high temperature sources.

Hazardous Polymerization: May Occur ☐ Will Not Occur ☒ Conditions to Avoid

SECTION 6 – HEALTH HAZARDS

1. Acute 2. Chronic
See attached MSDS on perchloroethylene.

Signs and Symptoms of Exposure: Dizziness, nasal irritation, nausea, incoordination, drunkenness; and, at high concentrations, unconsciousness and even death.

Medical Conditions Generally Aggravated by Exposure: Alcohol consumed before or after exposure may increase adverse effects.

Chemical Listed as Carcinogen or Potential Carcinogen — National Toxicology Program: Yes ☐ No ☒ — I.A.R.C. Monographs: Yes ☐ No ☒ — OSHA: Yes ☐ No ☒

Emergency and First Aid Procedures: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

ROUTES OF ENTRY

1. Inhalation: See above. (Primary Route)
2. Eyes: Irrigate immediately with water for at least 5 minutes.
3. Skin: Wash off with soap and water. Decontaminate clothing before reuse.
4. Ingestion: Do not induce vomiting. Call physician immediately.

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage: Avoid contact with skin, or breathing vapors. Handle with reasonable care and caution.

Other Precautions: Vapors of this product are heavier than air and will collect in low areas.

Steps to be Taken in Case Material is Released or Spilled: Small spills - Mop or wipe up immediately. Remove to out of doors. Large spills - evacuate area. Contain liquid. Transfer to closed metal containers.

Waste Disposal Methods (Consult federal, state, and local regulations): Send to a licensed reclaimer or permitted incinerator. Do not dump into sewers, on ground, or into any body of water.

SECTION 8 – SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection (Specify Type): Use NIOSH or MSHA approved air purifying or air supplying respirators accordingl

Ventilation: Local Exhaust — Mechanical (General) — Special — Other
Control airborne concentrations below exposure guideline.

Protective Gloves: Recommended if contact is expected. Eye Protection: Goggles recommended.

Other Protective Clothing or Equipment: Selection of specific items (gloves, boots, apron...) will depend on operations.

Work/Hygienic Practices: Treat AC-816 as perchloroethylene. See attached MSDS on perchloroethylene.

IMPORTANT
Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.

FEB 2 1988
OCCUPATIONAL SAFETY & HEALTH

ac products, inc.

172 East La Jolla Street, Placentia, California 92670 - (714) 630-7311 TELEX: 751832 AC PRODUCTS UD

AC-816 MASKANT

PRODUCT DESCRIPTION

AC-816 is an air cure general purpose peelable coating that provides protection to metallic surfaces during mechanical fabrication and chemical processing.

PRODUCT PERFORMANCE

AC-816 has demonstrated excellent performance when used as a chemical milling maskant and an anodizing stop off. A major breakthrough in the science of adhesion control has been incorporated into AC-816. As a result, lower, more uniform adhesion is obtained both before and after processing regardless of the alloy or pre-coat method used. AC-816 was formulated with an all perchloroethylene solvent system for use in a dip tank and will provide excellent flow properties. The all perchloroethylene solvent system lends itself to use with a carbon absorption solvent recovery system.

PRODUCT CHARACTERISTICS - AS SHIPPED

APPEARANCE	Blue-green viscous liquid
SOLIDS CONTENT (% by weight)	20.5 ± 2.0
SOLIDS CONTENT (% by volume)	23.5 ± 2.0
COVERAGE (Square feet/mil dry film)	380
VISCOSITY (#5 Zahn cup @ 75°F.)	28.0 ± 4.0 seconds
POUNDS PER GALLON	13.0 ± 0.2
FLASH POINT (PENSKY MARTENS)	None
STORAGE LIFE (Ambient temperatures)	1 Year
SOLVENT SYSTEM	Perchloroethylene

- CURED FILM (Typical Results)

TENSILE STRENGTH	600#
ELONGATION	300% minimum

ADHESION (Typical values in oz./inch width)

	BEFORE PROCESSING	AFTER PROCESSING
7075-T6 bare aluminum, solvent wiped	8 - 16 oz.	16 - 22 oz.
7075-T6 clad aluminum, solvent wiped	8 - 16 oz.	16 - 22 oz.
7075-T6 bare aluminum, deoxidized	12 - 18 oz.	18 - 22 oz.
7075-T6 clad aluminum, deoxidized	12 - 18 oz.	18 - 22 oz.

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RESISTANCE TO ACID/ALKALINE SOLUTIONS .... Excellent

In very aggressive acid solutions such as those found in the chemical milling of steel and titanium, AC-832 Topcoat may be desired.

PRODUCT PRECAUTIONS

DANGER! AC-816 CONTAINS perchloroethylene. VAPOR HARMFUL. HARMFUL OR FATAL IF SWALLOWED. KEEP OUT OF REACH OF CHILDREN. Keep away from heat, sparks, and open flame. Keep container closed when not in use. Use only with adequate ventilation. Avoid prolonged or repeated breathing of vapor. Avoid prolonged or repeated contact with skin. DO NOT TAKE INTERNALLY. FIRST AID: If swallowed, INDUCE VOMITING. CALL A PHYSICIAN IMMEDIATELY. Move patient to fresh air. Apply artificial respiration if not breathing. See MSDS for additional information.

PRODUCT PACKAGING

AC-816 is furnished in 5 gallon pails, 55 gallon F.O.T. steel drums, and, by special arrangement in 350 gallon liqui-bins.

PRODUCT USE INSTRUCTIONS

GENERAL - The directions and recommendations given below are intended to serve as a guide and may need modification to meet local conditions.

MIXING - AC-816 should be thoroughly mixed prior to use and remixed at least every 4 hours. Avoid introducing air into the coating during mixing. Parts must be clean and dry before coating for optimum performance.

THINNING - Use AC-816 as received. Should the material thicken during use due to evaporation, thin with perchloroethylene to retain compliance with A.P.C.D. requirements. Maintain the viscosity of the dip tank at 28 to 32 seconds viscosity in a #5 Zahn cup @ 75°F. For each 5°F. fluid temperature rise the viscosity will be reduced by 1 sec. Example: At a maskant temperature of 90°F. the optimum viscosity is 28 sec. in a #5 Zahn cup.

RECOMMENDED DRY FILM THICKNESS - Six to fourteen mils, depending on the process requirements.

CURE CYCLE - Allow the film to air cure for 4 hours minimum at 75°F. or above. At lower temperatures allow additional curing time. AC-816 films may be baked at 150°F. to 200°F. for 30 to 60 minutes after an initial air cure of 1 to 2 hours should faster processing be required. NOTE: AC-816 may be baked for 30 to 60 minutes @ 255°F. when used in plating and anodizing solutions for optimum results. The bake cycle should follow the normal air cure. Aluminum parts to be anodized after chemical milling need not be baked.

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AIRLESS SPRAY APPLICATION - Thin AC-816 to 16 seconds viscosity in a #5 Zahn cup with perchloroethylene.

Equipment:

1. Cold or hot circulating 25:1 spray unit.
2. Tips - Graco 163-721, 163-823 or equivalent, for parts larger than 12" x 12".
   Graco 163-415 or equivalent for extrusions and very small parts.
3. Tip filter unit - consists of 1 only Graco 205-264 tip filter 100 mesh, 1 only Graco 164-120 Retainer, and 1 only Graco 164-121 Retainer Nut.

Pressures and Temperatures:

1. Air pressure - 60 - 70#
2. Back pressure (Hot Airless) - 1,600 - 1,800# fluid pressure.
3. Temperature - Ambient to 200°F.

Application: Hold the spray gun 10 to 14 inches from the part. The speed with which the spray gun is moved determines the quality of the sprayed film. The more rapidly the spray gun is moved over the part, the better the quality of the film.

COLD AIRLESS SPRAY

1. Apply one fast box coat. Dry tack free.
2. Apply two fast box coats. Allow to dry 15 minutes.
3. Apply two or three box coats. Allow to dry.
4. Resultant dry film build should be 8 to 10 mils.
   Note: Optimum viscosity for cold airless spray application is 15 - 16 seconds #5 Zahn cup.

HOT AIRLESS SPRAY

1. Apply two fast box coats. Dry tack free.
2. Apply two fast box coats. Allow to dry for 15 minutes or more.
3. Apply 2 or 3 box coats. Allow to dry. Resultant film build should be 9 to 11 mils.

Should heavier films be required, apply additional coats. A box coat consists of a series of vertical and horizontal passes over the same surface. A 50 - 75% overlap is used depending on the speed with which the spray gun is moved.

Seller makes no warranty, express or implied, concerning the use of this product. Since conditions of use are beyond our control, buyer assumes all risk of use of this product. Seller's sole obligation shall be to replace the product if found defective. Seller shall not be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.